

CLAIM AMENDMENT(S)

1-44. (Canceled)

45. (Previously Presented) A method comprising:

configuring on a network element a plurality of circuits as listening, the plurality of circuits associated with a listening circuit structure;

converting any of said plurality of circuits configured as listening from listening to provisioned responsive to receipt of a packet thereon, wherein for each of the plurality of circuits converted said converting includes,

creating a provisioned structure that is empty,

retrieving a set of parameters for the circuit from a server external to the network element,

populating the provisioned circuit structure with the set of parameters, and

associating the circuit with the provisioned circuit structure; and

reconverting any of said plurality of circuits configured as provisioned from provisioned back to listening responsive to a predetermined event associated with that circuit.

46. (Previously Presented) The method of claim 45, wherein the memory required for one of the plurality of circuits configured as listening is less than the memory required for one of the plurality of circuits configured as provisioned.

47. (Previously Presented) The method of claim 45, wherein said configuring includes enabling oversubscribing by having more circuits than could be configured as provisioned at any given moment.

48. (Previously Presented) The method of claim 45, further comprising:
processing the plurality of packets received on the plurality of circuits configured as provisioned.
49. (Previously Presented) The method of claim 48, further comprising:
transmitting the plurality of packets to the Internet.
50. (Previously Presented) The method of claim 45, wherein the predetermined event is an Internet Service Provider (ISP) suspending a subscriber.
51. (Previously Presented) The method of claim 45, wherein the predetermined event is a port failing, the port associated with one of the plurality of circuits configured as provisioned.
52. (Previously Presented) The method of claim 45, wherein the predetermined event is servicing the network element.
53. (Previously Presented) The method of claim 45, wherein the predetermined event is a subscriber switching from DSL service to cable service.
54. (Previously Presented) A method comprising:
for each of a plurality entities, configuring in a network element a plurality of circuits as listening;
allowing each of said plurality of entities to maintain different sets of parameters for different ones of their plurality of circuits in a remote database, wherein the various sets of parameters specify accessibility of subscribers through said network element to networks of said plurality of entities;

for each of said circuits currently configured as listening on which a packet is received from one of said subscribers, attempting to provision in the network element that circuit with its set of parameters in said remote database; and

for each of said plurality of circuits that is currently provisioned on which a subscriber ending event occurs, unprovisioning that circuit in the network element.

55. (Previously Presented) The method of claim 54, wherein said subscribers comprise at least one of residential, telecommuter, small business and corporation.

56. (Previously Presented) The method of claim 54, wherein said remote database is a RADIUS database.

57. (Previously Presented) The method of claim 54, wherein the subscriber ending event is an Internet Service Provider (ISP) suspending one of said subscribers.

58. (Previously Presented) The method of claim 54, wherein the subscriber ending event is a port failing, the port associated with one of the plurality of circuits currently provisioned.

59. (Previously Presented) The method of claim 54, wherein the subscriber ending event is servicing the network element.

60. (Previously Presented) The method of claim 54, wherein the subscriber ending event is one of said subscribers switching from DSL service to cable service.

61. (Previously Presented) A method comprising:

for each of a plurality of entities, configuring in a network element a plurality of circuits as listening as opposed to provisioned, wherein the network element lacks parameters to process packets received on those of the circuits currently configured as listening as opposed to provisioned, but attempts to access such parameters from a remote database responsive to receipt of packets thereon; and

allowing each of said plurality of entities to remotely provision their plurality of circuits configured as listening through maintenance of sets of parameters in said remote database that are retrieved as needed by the network element responsive to receipt of packets on those of the circuits configured as listening, wherein the various sets of parameters specify how to process packets of subscribers accessing services of said plurality of entities through said network element.

62. (Previously Presented) The method of claim 61, wherein one of said services is selected from the group consisting of a premium branded service, internet access service, wholesale media service and corporate network accessibility.

63. (Previously Presented) The method of claim 61, wherein said remote database is a RADIUS database.